

OIB - C-130H Hercules #439 04/15/15 Science Report

Aircraft:

[C-130H Hercules #439](#) ([See full schedule](#))

Date:

Wednesday, April 15, 2015

Mission:

OIB

Mission Location:

Kangerlussuaq, Greenland

Mission Summary:

Mission: Helheim-Kangerdlugssuaq Gap B (priority: high)

This is a new mission, designed (along with Helheim-Kangerdlugssuaq Gap A) to re-fly a 2012 grid over the area of complex terrain between the Helheim and Kangerdlugssuaq Glaciers. Each of these new missions alone forms a coast-parallel grid spaced at 20 km, and the two flights together interlace to form a 10-km grid. This particular mission also reoccupies the centerlines of two glaciers in the area (names unknown).

A pair of strong low pressure systems, which had entered southern Greenland from the west overnight, spread extensive cloud cover over almost the entire southern half of Greenland. The only exception was a small clear area in the east coast region between Helheim and Kangerdlugssuaq Glaciers. Satellite images of this area showed some areas of fog in the low valleys but otherwise clear skies, so we selected this area to fly today. We were able to successfully collect data over almost the entire survey area, with the exception of western portions of the transit lines out of, and into, Kangerlussuaq in the west, and a few glacier valleys in the east near the coast. Western Greenland has been persistently cloudy for the past 10 days, and we have been unable to fly a single mission there so far.

We also had a pair of significant instrument issues today. One was a darkened spot on the nadir window, discovered after takeoff, which restricted the view of the primary DMS camera. The operator switched to the backup camera for the mission. Also, the ATM wide scanner (T3) suffered a mechanical failure in the scanner assembly which was not discovered until after takeoff. We elected to continue the mission, since the ATM T5 narrow scanner was still operating normally. ATM T3 did not collect any data today. We are optimistic that we can repair the instrument with parts and supplies we have on hand, and will re-evaluate our options as the repair attempt progresses this evening.

We flew a ramp pass, for instrument calibration purposes, at 1500' AGL.

Data volumes:

ATM: 0 Gb (scanner failure)

CAMBOT: 87 Gb

DMS: 116 Gb

Ku-Band Radar: 410 Gb

MCoRDS: 2.8 Tb

Narrow Swath ATM: 33 Gb

NSERC Onboard Data: TBD

Snow Radar: 410 Gb

total data collection time: 7.5 hrs

Images:

Landscape of southeastern Greenland



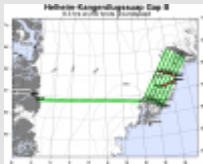
[Read more](#)

Lower Kangerdlugssuaq Glacier and fjord



[Read more](#)

Map of Helheim-Kangerdlugssuaq Gap B



[Read more](#)

Submitted by:

John Sonntag on 04/15/15

Related Flight Report:

C-130H Hercules #439 04/14/15

Flight Number:

Helheim-Kangerdlussuaq Gap B

Payload Configuration:

OIB

Nav Data Collected:

No

Total Flight Time:

7.9 hours

Submitted by:

Luci Crittenden on 04/14/15

Flight Segments:

From:	BGSF	To:	BGSF
Start:	04/14/15 10:12 Z	Finish:	04/14/15 18:06 Z
Flight Time:	7.9 hours		
Log Number:	151002	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		

Flight Hour Summary:

	151002
Flight Hours Approved in SOFRS	334.4
Total Used	297.6
Total Remaining	36.8

151002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
03/12/15	ATF	Check	1.5	1.5	332.9
03/13/15	PTF - GPS	Check	2	3.5	330.9
03/13/15	PTF - Radar #1	Check	0.8	4.3	330.1
03/13/15 - 03/14/15	PTF - Radar #2	Check	4.5	8.8	325.6
03/16/15	PTF - Radar #3	Check	2.4	11.2	323.2
03/17/15	Transit	Transit	7.8	19	315.4

03/19/15	Nansen Gap	Science	7.4	26.4	308
03/24/15	Sea Ice - Zigzag East	Science	8.2	34.6	299.8
03/25/15	Sea Ice North Pole Transect ? Thule	Science	8.2	42.8	291.6
03/26/15	Sea Ice - Laxon Line	Science	9.2	52	282.4
03/27/15 - 03/28/15	Sea Ice - East Beaufort Sea	Science	8.2	60.2	274.2
03/29/15 - 03/30/15	Sea Ice - North Beaufort Loop	Science	8.9	69.1	265.3
03/30/15 - 03/31/15	Sea Ice - SIZRS Zigzag	Science	8.1	77.2	257.2
04/01/15	Sea Ice - South Basin Transect	Science	8.8	86	248.4
04/03/15	Sea Ice - South Canada Basin	Science	7.4	93.4	241
04/06/15	OIB Transit from BGTL- BGSF	Transit	3.3	96.7	237.7
04/08/15	Helheim-Kangerdlussuaq	Science	8	104.7	229.7
04/09/15	K-EGIG Summit	Science	8.3	113	221.4
04/10/15	Southeast Glaciers 01	Science	8	121	213.4
04/11/15	East Glaciers 01	Science	8	129	205.4
04/13/15	Southeast Coastal	Science	7.7	136.7	197.7
04/14/15	Helheim-Kangerdlussuaq Gap B	Science	7.9	144.6	189.8
04/17/15	Umanaq B	Science	7.5	152.1	182.3
04/18/15	Southwest Coast A	Science	8.1	160.2	174.2
04/20/15	Penny 01	Science	6.3	166.5	167.9
04/21/15	Thomas-Jakobshaven 01	Science	8.7	175.2	159.2
04/22/15	Southeast Flank 01	Science	7.6	182.8	151.6
04/23/15	Jakobshavn-Eqip-Store	Science	9.2	192	142.4
04/24/15	Geikie 02	Science	8.3	200.3	134.1
04/25/15	Jakobshaven 02/ Mop Up	Science	6.9	207.2	127.2
04/27/15	Southwest Coastal B	Science	8	215.2	119.2
04/28/15	Southeast Glaciers 02	Science	7	222.2	112.2
04/29/15	TRANSIT BGSF-BGTL	Transit	2.5	224.7	109.7
04/30/15	ATM Laser Repair Checkout	Science	2.3	227	107.4
05/01/15	NW Coastal A	Science	7.2	234.2	100.2
05/05/15	IceSat-2 North / CryoSat- 2 SARIn	Science	8.2	242.4	92
05/06/15	North Glaciers 01	Science	8.2	250.6	83.8
05/07/15	Devon-Barnes 01	Science	7.8	258.4	76
05/08/15	Zigzag West	Science	7.2	265.6	68.8
05/11/15	Northwest Glaciers 01	Science	7.8	273.4	61
05/12/15	North-Central Gap 02	Science	8.1	281.5	52.9
05/15/15	North-Central Gap 01	Science	7.3	288.8	45.6
05/21/15	Transit - Thule to Bangor, ME	Transit	6.5	295.3	39.1
05/22/15	Transit - Bangor, ME to WFF	Transit	2.3	297.6	36.8

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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NASA Official: Bruce A.
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